Vermont Legislative Joint Fiscal Office

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ISSUE BRIEF

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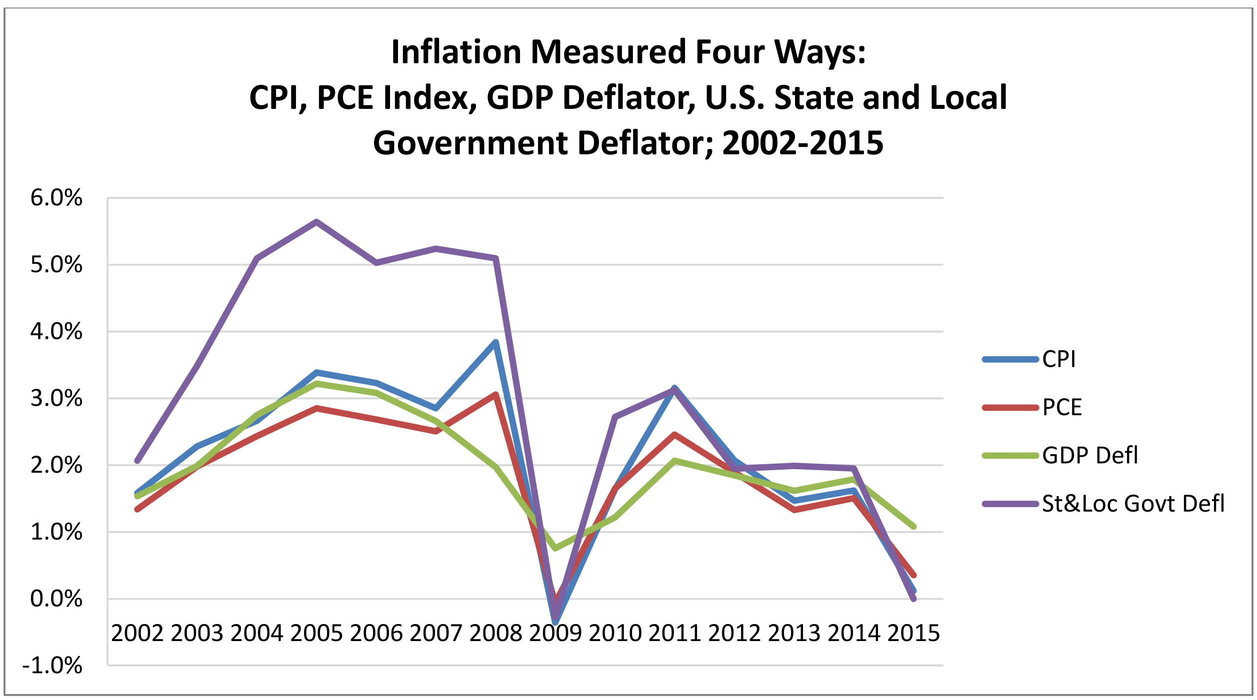
Different Measures of Inflation

Inflation is a general increase in the overall price level of goods and services in the economy. A price index measures changes in the price of a group of goods and services. Different indexes track different products and services, and indexes can be calculated in different ways. As a result, various indexes can send diverse signals about inflation.

Vermont policy makers may confront four price indexes, each used for different purposes:

- The Consumer Price Index (CPI): Vermont's minimum wage is tied to the CPI, for example.
- The Personal Consumption Expenditures Price Index (PCE index): The Federal Reserve uses the PCE index to measure consumer inflation.
- The U.S. Gross Domestic Product Deflator (GDP deflator): It allows comparison of GDP measures adjusted for price changes across different years.
- The State & Local Government NIPA Chain-Weighted Deflator (St&Loc Govt deflator): It determines the size of the Vermont General Fund Transfer to the Education Fund.

The figure illustrates inflation over the past 14 years as measured by those four price indexes.



Introduction to the CPI and the PCE price index

Both the CPI and the PCE price index calculate the price level for consumer goods and services by pricing a basket of goods. If the price of the basket goes up, the price index goes up. But the baskets are not the same, and the biggest differences between the CPI and PCE arise from the differences in their baskets.

- The CPI is based on a survey of what households are buying;[1] the PCE index is based on surveys of what businesses are selling.
- The CPI covers only out-of-pocket expenditures on goods and services purchased. It excludes other expenditures that are not paid for directly. For example, medical care paid for by employer-provided insurance, Medicare, and Medicaid are not included. They are, however, included in the PCE index.
- The CPI uses the same basket of goods and services over time, whereas the PCE price index tries to account for substitution between goods when one good gets more expensive. If the price of milk goes up, people buy less milk; the PCE index, also called an implicit price deflator, uses a new basket of goods that reflects people buying less milk.

Introduction to the Deflators for GDP and State & Local Government

Like the PCE price index, the deflators for Gross Domestic Product (GDP) and State & Local Government are implicit price deflators.

- Implicit price deflators are not based on a fixed basket of goods and services but reflect the ratio of the current-dollar value of goods and services to the “real” value of those goods and services in a base year.
- Chain-weighted indexes such as the GDP deflator often provide a more accurate picture of economic activity than fixed-weighted indexes such as the CPI.
- The GDP deflator measures the level of prices of all new, domestically produced, final goods and services in an economy. The “basket” for the GDP deflator is allowed to change from year to year with people’s consumption and investment patterns.
- The “basket” for the State & Local Government NIPA Chain-Weighted Deflator reflects the goods and services represented in expenditures by state and local governments. For

[1] Most measures of inflation used in federal and state legislation use the CPI-U, designed to track price changes faced by all urban consumers representing about 88 percent of the total U.S. population. Social Security cost-of-living adjustments are tied to the CPI-W, designed to track price changes faced by urban wage earners and clerical workers representing about 28 percent of the U.S. population. Since 1985, the two indexes have differed only in the expenditure weights assigned to item categories and geographic areas.

example, it is heavily influenced by wages and benefits for public employees, including teachers.

Best Uses for the Different Measures

The CPI continues to be the most well-known and widely-used measure of inflation, but most analysts prefer the PCE price index when analyzing how the price of consumption changes over time because it reflects current spending by and on behalf of households and nonprofit institutions that serve households. The Federal Reserve has used the PCE price index as its primary measure of inflation since 2000.

The GDP deflator is designed to measure the price of goods and services produced in the United States: consumption, investment, government spending, and net exports. It moves differently from the CPI or PCE price index in part because the consumption price indexes include imported goods but also because they measure the rate of inflation faced by households, not by businesses or governments.

Using the State & Local Government deflator is appropriate when looking at the price of goods and services purchased by state and local governments. However, it may not be the best price index for evaluating state and local government tax revenues over time because those revenues are based on the incomes and consumption of households and businesses.